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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/348,518	07/07/1999	HIROSHI MURAKAMI	31050.5US01	5347

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EXAMINER

BROADHEAD, BRIAN J

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/348,518

Applicant(s)

MURAKAMI ET AL.

Examiner

Brian J. Broadhead

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 26-31, 35-46, 48 and 49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 37, 38 and 41 is/are allowed.
- 6) ☒ Claim(s) 26-29, 31, 35, 36, 39, 40 and 42-46 is/are rejected.
- 7) ☒ Claim(s) 30, 48 and 49 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 27 February 2003 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 2-27-03 have been disapproved because the drawing with the proposed changes to figure 14 has not been received. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 26, 28, 29, 35, 39, 43, 45 and 46 are rejected under 35 U.S.C. 102(e) as being anticipated by Tagami et al., 5812070.

3. As per claims 26, 28, 29, and 35, Tagami et al. discloses a sensor installed on the vehicle for sensing the state of charge of at least one battery on line 65, on column

5, through line 5, on column 6; a vehicle subsystem installed in the vehicle and operatively coupled to the sensor, for transmitting information reflecting the state of charge of at least one battery on lines 25-30, on column 4; a central station including a computer system for receiving and processing the information regarding the state of charge of the at least one battery including a tracking system that provides vehicle location information corresponding to the location of each vehicle to allocate vehicles in response to the information regarding the state of charge of at least one battery to effectuate an efficient battery charging operation on lines 37-45, on column 4, and lines 2-16, on column 6; the central station is configured to reserve a vehicle or group of vehicles having the highest state of charge for a user request above a predetermined traveling distance and allocate a vehicle having a second highest state of charge to a user request below a predetermined traveling distance on lines 63, on column 5 through lines 16, on column 6; a display device installed on the vehicle on lines 64-65, on column 6; a processor operatively coupled to the display device to respond to a first signal from the computer system to display a first warning message on the display device on lines 14-19, on column 5;

4. As per claims 39, 43, 45, and 46, Tagami et al. discloses the limitations set forth above; each vehicle comprises an electric powered vehicle having a battery powered source which defines the state of charge of the vehicle on lines 62-65, on column 5; each port includes a charging facility for selectively coupling to a vehicle to increase the state of charge of the vehicle over a charging period on lines 11-16, on column 7; the central station computer system is programmed to process vehicle location information

and state of charge information to select a vehicle located at a given port for coupling to the charging facility at that port, based on the state of charge information for the vehicle on lines 11-16, on column 7.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 27, 36, and 44, are rejected under 35 U.S.C. 103(a) as being unpatentable over Tagami et al., 5812070, in view of Kondo et al., 6181991.

7. Tagami et al. disclose the limitations as set forth above. Tagami et al. does not disclose the central station is configured to allocate the vehicle having a highest state of charge. Kondo et al. teach the central station is configured to allocate the vehicle having a highest state of charge on lines 15-17, on column 6. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the display device of Kondo et al. in the invention of Tagami et al. because such modification would provide an electric vehicle sharing system which is capable of supplying users efficiently with electric vehicles whose batteries have been appropriately charge as stated on lines 50-51, on column 1, of Kondo et al.

8. Claims 40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tagami et al., 5812070, in view of Henze et al., 5803215.

Tagami et al. disclose all the limitations as set forth above. Tagami et al. do not disclose the central computer system determines a charging order for a plurality of vehicles located at a port based on the stored amount of energy of each vehicle in the plurality of vehicles; and said charging facility defines a charging rate for each vehicle as the vehicles increasing SOC over the charging period and wherein the plot of the charging rate of each vehicle includes a generally linear region and a nonlinear section and assigning vehicles to charger if SOC of the vehicle is in the linear region. Henze et al. teaches of the central computer system determines a charging order for a plurality of vehicles located at a port based on the stored amount of energy of each vehicle in the plurality of vehicles on lines 35-49, on column 2; and said charging facility defines a charging rate for each vehicle as the vehicles increasing SOC over the charging period and wherein the plot of the charging rate of each vehicle includes a generally linear region and a nonlinear section and assigning vehicles to charger if SOC of the vehicle is in the linear region on lines 62-65, on column 5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the charging system of Henze et al. in the invention of Tagami et al. because such modification would provide a system that would charge the batteries of the cars and protect them from overcharging.

9. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tagami et al., 5812070, in view of Tabata et al., 5908453.

10. Tagami et al. discloses the limitations as set forth above. Tagami et al. do not disclose determining when the SAE is greater than a predetermined value and generating a second signal in response to the sensed SAE being less than a predefined

minimum and then displaying a warning message on the vehicle display device. Tabata et al. teaches determining when the SAE is greater than a predetermined value and generating a second signal in response to the sensed SAE being less than a predefined minimum and then displaying a warning message on the vehicle display device on lines 25-32, on column 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the warning of Tabata et al. in the invention of Tagami et al. because such modification would provide more useful features to an SAE system.

***Allowable Subject Matter***

11. Claims 37, 38, and 41 are allowed.
12. Claims 30, 48, and 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
13. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose the central station computer system is further programmed to process vehicle location information for a vehicle due to arrive at a given port, to provide an estimated time of arrival of the vehicle at that port and for including the vehicle in the vehicle search group for that port if the estimated time of arrival is within a predefined time period; including in vehicle search group of a given port the vehicle at a charging facility at the port if the vehicle has a charging time period which is due to expire within a predefined time period; and the charging order of the

vehicles is based on the current stored amount of energy, with the lowest being charged first and the highest last.

### ***Response to Arguments***

14. Applicant's arguments with respect to claims 26- 29, 31, 35, 36, 39, 40, 42-46, and 49 have been considered but are moot in view of the new ground(s) of rejection. Applicant's argument relied on arguing previous rejections did not disclose the subject matter of the amended claims. The rejections have been changed to reflect the amended claims. For example, Tagami et al. discloses efficient charging since the vehicle with the amount of charge required for the user is chosen for that user. Also, for claims 29, Tagami et al. does split the vehicles into groups, one group being the fully charged vehicles and the other group being the vehicles that still require more charge.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Broadhead whose telephone number is 703-308-9033. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William A. Cuchlinski can be reached on 703-308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.



Art Unit: 3661

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

BJB  
June 1, 2003



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